

Vermont's Statewide Report on Kindergarten Readiness 2013-2014

Introduction

Since 2000, Vermont has gathered information on the readiness of children entering kindergarten by surveying kindergarten teachers about their students' knowledge and skills within the first six to ten weeks of school. The effort to measure school readiness is a collaborative project of the Vermont Agency of Education (AOE), the Department for Children and Families, and the Department of Health.

There are many interpretations of what constitutes "readiness". Vermont's concept of children's readiness is multidimensional; it includes social and emotional development, communication, physical health, as well as cognitive development, knowledge, and approaches to learning (e.g., enthusiasm for learning, persistence, curiosity). Vermont's concept also reflects the belief that "school readiness" is interactional: children need to be ready for schools, and schools need to be ready to accommodate the diverse needs of children. Since 2000, surveys for assessing schools' readiness have been conducted several times. The Ready Schools survey asks principals and teachers to report on their school's transition practices, connections to families of young children and the community, and other related issues. Despite the importance of this information, the Ready Schools survey has not been conducted for several years now.

Methodology

- ***Data Collection:***

Kindergarten teachers from around the state were asked to complete a Kindergarten Readiness Survey (KRS) for each of their students during the fall of 2013. The KRS consists of 30 items across the domains of "Social and Emotional Development," "Approaches to Learning," "Communication," "Cognitive Development and General Knowledge," and "Physical Development and Wellness." The teacher rates each child's skills as either "beginning", "practicing" or "performing independently" on the first 27 items and judges if hunger, illness, or fatigue inhibit the child's learning on the last three items. The KRS is not a direct assessment of children; rather it relies on the accumulated observational knowledge the teacher has developed about the child during the first few weeks of kindergarten.

For the past four years, the KRS was delivered through a secure online version of Survey Monkey; one survey per child. This year a new method for collecting survey data was used. Each kindergarten teacher received one Excel file to record survey responses for all of the kindergartners in his or her class; one row per child. The Excel file was then uploaded to a secure AOE website. Some schools encountered difficulties with the upload as well as with completing the Excel file due to software incompatibility.

- ***Data Analysis***

The data were analyzed at the item level producing the number and percentage of children reported at each the "beginning", "practicing" and "performing independently" levels and the number and percentage of children whose learning was inhibited by illness, fatigue or hunger

“never”, “seldom”, “sometimes” or “often”. The number and percentage of “Don’t Know” or missing values were also calculated. At the item level, a child is considered “ready” if the child is rated as “practicing” and “performing independently” for the first 27 items and as “never” or “seldom” in the three inhibitor items.

Statistical Product and Service Solutions (SPSS) was used to determine “readiness” for each of the five domains and to calculate an overall readiness value. Readiness at the domain level requires that the child have a rating of “practicing”, “performing independently”, “never” or “seldom” on all items within the domain. Readiness across the five domains requires that the child is rated as “ready” on all items in the survey. Survey items rated as “Don’t know” or missing responses are not included in the denominator when calculating domain and overall readiness percentages.

Results

A total of 5,658 Kindergarten Readiness Surveys were submitted. The total kindergarten enrollment for 2013-2014 is 6,250 children; hence, 91% of all kindergartners were surveyed. Last year the KRS participation rate was only 81.8%.

• *Characteristics of Kindergartners Surveyed*

The KRS asks teachers to identify each child’s gender, the child’s eligibility for specialized services (e.g., special education, Title I), if the child is an English Language Learner, and whether the child attended an early childhood program prior to kindergarten. Table 1 presents the results of these data.

TABLE 1: Characteristics of Kindergartners Surveyed¹

| | Number | Percentage |
|--|--------|------------|
| Boys | 2871 | 51% |
| Girls | 2754 | 49% |
| Missing Response on Gender Item | 33 | 0.58% |
| Received Specialized Services: | 1924 | 34% |
| • <i>Special Education</i> | 695 | 12% |
| • <i>EST</i> | 588 | 10% |
| • <i>504</i> | 84 | 1.5% |
| • <i>Title I Services</i> | 894 | 16% |
| English Language Learners | 149 | 3% |
| Attended some type of Early Childhood Program (ECP): | 4633 | 82% |
| • <i>Did not attend any Early Childhood Program</i> | 572 | 10% |
| • <i>Do not Know if child attended ECP</i> | 412 | 7% |
| • <i>Missing Response</i> | 41 | 0.7% |
| • <i>Head Start</i> | 396 | 7% |
| • <i>School-based Pre-K</i> | 1876 | 33% |
| • <i>Community-based Pre-K</i> | 464 | 8% |
| • <i>Private preschool</i> | 1098 | 19% |
| • <i>Family-based child care</i> | 253 | 5% |
| • <i>Center-based child care</i> | 445 | 8% |

¹ These are self-reported data that have not been verified.

- ***Readiness By Domain and Overall Readiness Rating***

The 30 items on the Kindergarten Readiness Survey² are clustered into five domains:

- Social-Emotional Development
- Approaches to Learning
- Communication
- Cognitive Development
- Wellness²

The number and percentages of children who were rated as “practicing” or “performing independently” (i.e. “Ready”) on all of the items within a domain are presented in Table 2.

TABLE 2: Readiness by Domain & Across All 5 Domains

| <i>Domain</i> | <i>Number “Ready”</i> | <i>Valid Responses</i> | <i>Percent “Ready”</i> |
|-------------------------------------|-----------------------|------------------------|------------------------|
| Social-Emotional Development | 4111 | 5658 | 73% |
| Approaches to Learning | 3881 | 5658 | 69% |
| Communication | 4668 | 5658 | 83% |
| Cognitive Development | 3546 | 5658 | 63% |
| Wellness | 4693 | 5658 | 83% |
| Across All 5 Domains | 2533 | 5154 | 49% |

According to the KRS data, just under half (49.1%) of all children were rated as “ready for kindergarten” in all five domains of the survey.

- ***Readiness by Item***

The number and percentage of children rated as “beginning”, “practicing”, “performing independently” or “don’t know” for each item are presented in Appendix I. Note that the operational definition of “ready” is that the child is rated as “practicing” or “performing independently”, while “not ready” is “beginning”. Items in which the rating was “don’t know” or the item was left blank are excluded from the denominator when calculating “readiness” percentages.

Discussion of KRS Results

The statewide results for this year’s KRS assessment show an across the board decrease in the percentage of children “ready” at the item and domain levels. The overall readiness rate dropped from 61% in 2012-2013 to only 49% this year. Of the 58 supervisory unions and districts that submitted KRS data, 49 or 86% evidenced lower percentages of children ready for kindergarten.

² Wellness includes children who demonstrate age appropriate self-help skills **and** who seldom or never appear to be inhibited by illness, fatigue or hunger.

The reasons for the observed decreases at the **domain level** could be due to several factors. First, the new methodology used to collect the information could have contributed to an “implementation dip”. The new Excel data collection method resulted in almost three times more items left blank which tends to bias the estimate of children “ready” downwards. Secondly, the percentage of surveys submitted rose from 82% last year to 91% of all kindergartners this year. Further analysis showed that some teachers were completing the KRS for the first time without any training on the items and the rating scale. Additional analyses of the data showed that more surveys were submitted for children who are eligible for Free and Reduced Lunch (FRL) and/or are receiving special education services. In comparison to the general population, these two population subgroups are more frequently rated as “beginning”. These are just a few of the possible explanations for the decrease. Undoubtedly, there may be other reasons to account for this decline. It is difficult to believe that the lower rates are due to an actual drop in readiness across the state and in 86% of school districts.

The results at the **item level** provide a more detailed picture of how this year’s kindergartners were rated on the KRS. While comparisons with last year’s results still indicate an overall drop, 90% or more of the kindergartners were rated as “ready” (i.e., practicing or performing independently) on 12 of the 27 items and “ready” (i.e., never or seldom) on all three wellness items. These 12 items are spread throughout the domains, although fewer are in the “Approaches to Learning Domain” (refer to Table 3 on page 5). It should be noted that 12% of all children surveyed are receiving special education services; nevertheless, the item level data suggest that most children demonstrated some knowledge and skills deemed necessary for success in kindergarten.

There were two items in which less than 80% of all children surveyed were rated as “ready”. These are:

- Shows ability to discriminate and identify speech sounds (77%)
- Uses scribbles, symbols or letters to write or represent words or ideas (79%)

The apparent contradiction of the finding that only 49% of all kindergartners were found “ready” across all five domains, while 80% or more of the children were rated as “ready” on all but two out of the 30 items on the KRS, can be resolved by remembering the operational definition of “ready” for the domain levels and across all domains. As stated earlier, to be “ready” in any domain, all ratings within that domain must be “practicing” or “performing independently”. To be considered “ready” across all domains, a kindergartner must be rated “ready” on all items in all domains.

TABLE 3: KRS Items on which 90% or More of Kindergartners Were Rated “Ready”

| <i>Domain</i> | <i>Item</i> | <i>“Ready”</i> |
|---|--|----------------|
| Social-Emotional Development | Separates easily from parent/caregiver | 95% |
| | Adapts to transitions within the school day | 90% |
| | Interacts positively with adults in the classroom | 94% |
| Approaches to Learning | Appears enthusiastic and interested in classroom activities | 92% |
| Communication | Communicates needs, wants, or thoughts in his/her primary language | 92% |
| | Engages in conversation (e.g. complete sentences, turn-taking, etc.) | 91% |
| | Understands simple directions, requests and information | 92% |
| Cognitive Development | Shows awareness of how books are organized and used | 90% |
| | Recognizes his/her most commonly used name in print | 95% |
| | Engages in imaginative play | 95% |
| | Shows the ability to count 5 or more objects using one-to-one correspondence | 93% |
| Physical Health & Development (Wellness) | Demonstrates age appropriate self-help skills (e.g. dressing, toileting, wiping nose, washing hands) | 97% |
| | <i>This child’s ability to learn is inhibited by: (Never & Seldom = Ready)</i> | |
| | • Illness | 95% |
| | • Fatigue | 90% |
| | • Hunger | 96% |

Conclusion

The major question the Kindergarten Readiness Survey (KRS) is designed to answer is: How ready are Vermont’s kindergartners? In order to provide the most accurate estimate of readiness, we need to use an assessment tool that truly measures readiness and is fair to all subgroups. A validation study of Vermont’s KRS is currently underway. The early results from a national research group conducting this study indicate that the KRS has several strengths; however, there are areas that need to be improved. The operational definitions for “ready” in a domain and across domains are also being examined. Furthermore, we will be developing a secure web-based survey tool to avoid the technological problems we faced this past year. As these improvements are made and more information on the items and rating scales are provided to kindergarten teachers, the confidence we have in the KRS results accurately reflecting children’s readiness will increase.

Appendix I

Statewide Item Level Responses 2013-2014

| Social-Emotional Development | Beginning % (N) | Practicing % (N) | Performing independently % (N) | Don't Know & Missing % (N) |
|--|----------------------------|-----------------------------|---|---|
| Plays cooperatively with different children | 11% (644) | 35% (1959) | 54% (3035) | 0.3% (20) |
| Separates easily from parent/caregiver | 3% (154) | 14% (785) | 81% (4567) | 2% (152) |
| Uses problem solving skills in social situations | 19% (1074) | 47% (2666) | 33% (1879) | 0.6% (39) |
| Appropriately expresses feelings and needs | 16% (899) | 39% (2198) | 45% (2552) | 0.1% (9) |
| Adapts to transitions within the school day | 10% (553) | 28% (1559) | 62% (3539) | 0.1% (7) |
| Interacts positively with adults in the classroom | 6% (361) | 25% (1411) | 69% (3877) | 0.1% (9) |
| Approaches to Learning | Beginning % (N) | Practicing % (N) | Performing independently % (N) | Don't Know & Missing %(N) |
| Can persist in a self-directed activity for at least 15 minutes | 12% (659) | 28% (1596) | 60% (3395) | 0.1% (8) |
| Appears enthusiastic and interested in classroom activities | 8% (451) | 27% (1521) | 65% (3675) | 0.1% (10) |
| Uses a variety of learning strategies in the classroom | 18% (1046) | 43% (2450) | 38% (2131) | 0.4% (28) |
| Is able to pay attention during teacher-directed group activities for approximately 15 minutes | 18% (1005) | 36% (2020) | 46% (2624) | 0.1% (9) |
| Knows when and how to use adults as a resource | 13% (722) | 38% (2130) | 49% (2777) | 0.5% (29) |
| Initiates activities in classroom | 13% (711) | 32% (1786) | 56% (3149) | 0.1% (12) |
| Shows curiosity (asks questions, probes, tries new things, etc.) | 11% (618) | 34% (1945) | 54% (3080) | 0.3% (15) |

| Communication | Beginning % (N) | Practicing % (N) | Performing independently % (N) | Don't Know & Missing %(N) |
|---|----------------------------|-----------------------------|---|--|
| Follows simple classroom rules and instructions with reminders | 12% (674) | 33% (1885) | 55% (3102) | 0.3% (17) |
| Communicates needs, wants, or thoughts in his/her primary language | 7% (377) | 21% (1201) | 71% (4040) | 0.7% (40) |
| Engages in conversation (e.g. complete sentences, turn-taking, etc.) | 8% (474) | 25% (1437) | 66% (3732) | 0.3% (15) |
| Understands simple directions, requests and information | 8% (432) | 24% (1351) | 68% (3858) | 0.3% (17) |
| Cognitive Development | Beginning % (N) | Practicing % (N) | Performing independently % (N) | Don't Know & Missing %(N) |
| Shows awareness of how books are organized and used | 9% (512) | 26% (1483) | 64% (3645) | 0.3% (18) |
| Can recall and explain a sequence of events (e.g. can tell about a recent activity, can retell a story) | 13% (747) | 36% (2051) | 50% (2827) | 0.5% (33) |
| Recognizes his/her most commonly used name in print | 5% (279) | 13% (751) | 82% (4617) | 0.2% (11) |
| Engages in imaginative play | 4% (215) | 17% (968) | 78% (4423) | 0.9% (52) |
| Shows ability to discriminate and identify speech sounds | 22% (1265) | 37% (2120) | 40% (2252) | 0.4% (21) |
| Recognizes 10 or more letters of the alphabet | 18% (991) | 17% (968) | 65% (3673) | 0.4% (26) |
| Uses scribbles, symbols or letters to write or represent words or ideas | 20% (1123) | 29% (1662) | 50% (2852) | 0.4% (21) |
| Shows the ability to count 5 or more objects using one-to-one correspondence | 8% (461) | 16% (902) | 76% (4282) | 0.2% (13) |
| Can identify several basic geometric shapes (e.g. circle, square, rectangle, triangle) | 8% (463) | 28% (1571) | 61% (3462) | 3% (162) |
| Physical Health & Development | Beginning % (N) | Practicing % (N) | Performing independently % (N) | Don't Know & Missing %(N) |
| Demonstrates age appropriate self-help skills (e.g. dressing, toileting, wiping nose, washing hands) | 2.7% (146) | 10.8% (575) | 86.4% (4,597) | (7) |

| This child's ability to learn appears to be inhibited by: | | | | | |
|--|---------------|---------------|------------------|--------------|-----------------------|
| | Never | Seldom | Sometimes | Often | Don't Know (N) |
| Illness | 90.0% (4,790) | 5.0% (264) | 4.2% (222) | 0.9% (49) | n/a |
| Fatigue | 83.3% (4,436) | 6.4% (339) | 8.4% (447) | 1.9% (103) | n/a |
| Hunger | 91.2% (4,855) | 4.2% (225) | 3.6% (194) | 1.0% (51) | n/a |

N.B. Row totals may not add exactly to 100% due to rounding.